

DESIGN GUIDE

I made this free design guide for everyone who wants to get better in designing characters. The guide oriented mostly for 3D, but if you are 2D artist most of the rules still apply.

Whether you are into sci-fi, realism or fantasy, you will find the key aspects of which design principles need to be used (and how to apply them) to make cool and appealing design.

Bunch of useful art tips included.



CREATE WHAT YOU WISH EXISTED.

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THE IDEA

First of all, visualise who is the character. What do they do? Are they evil/good, a fighter lost in the desert, looking for his wife, stolen by space pirates? Or maybe a combat medic with mechanical wings and glowing skin? A good heart cowboy drinking a nuke beer and riding a motorcycle? Write out everything that comes to your mind.

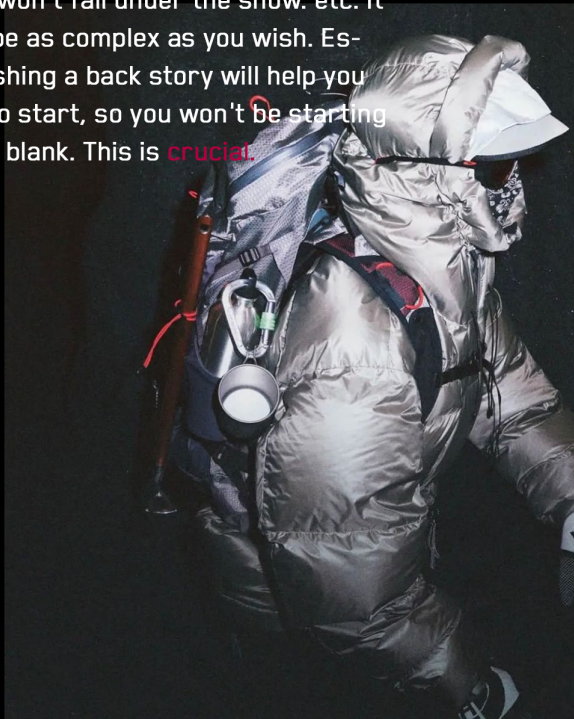
Think about character background, location. Desert, snowbound blizzardy forest? This will help to nail down a lot of design choices. Desert character/robot would have something that helps it to deal with heat, perhaps charge from the sun, etc. while snow landscape will determine how to deal with snow terrain, manage robot parts so the snow won't fall into the crevices and mess things up, or design a special boots that won't fall under the snow. etc. It can be as complex as you wish. Establishing a back story will help you out to start, so you won't be starting from blank. This is **crucial**.



Cyber Feet by me

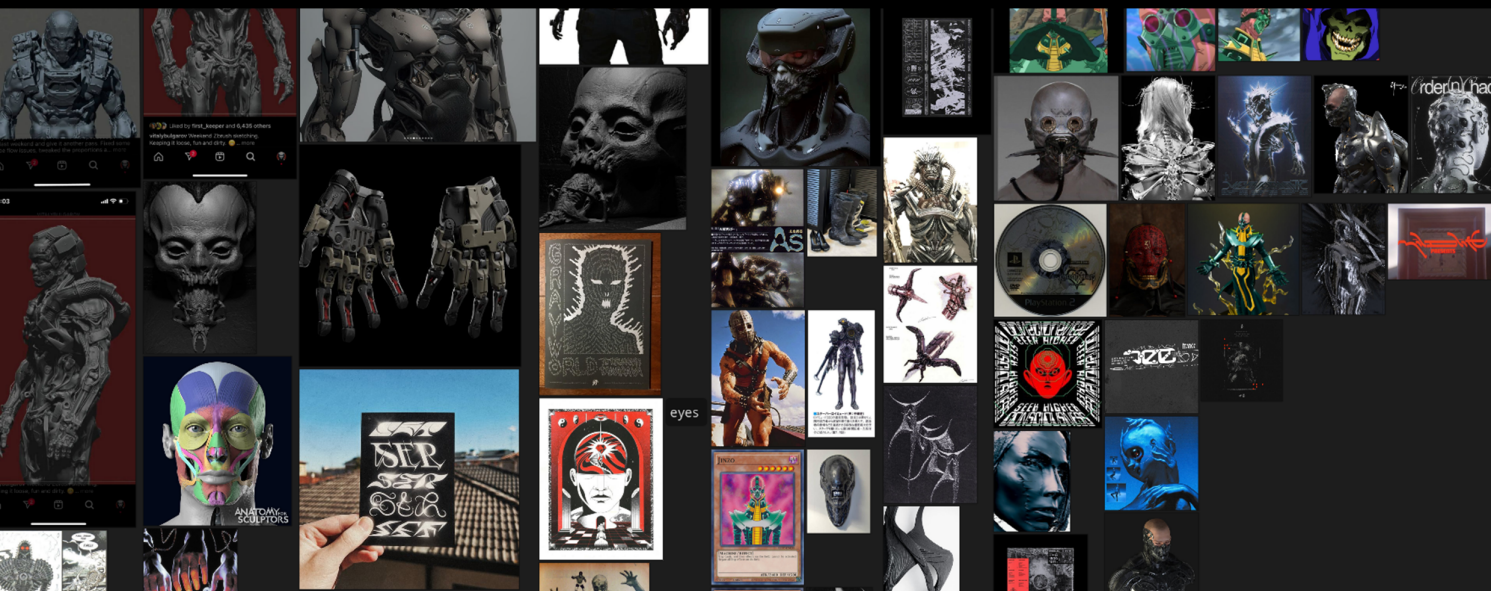


Antonio Esparza



Th3ther by Kaio Cesar

Think about the vibe of your characters. What mood and emotion do you want the viewer to feel when they look at them? Are they menacing, deadly, sexy, soft or friendly? This will heavily determine the design language, shape forms, colours and pose, when you get to work on them.



My personal board example

Gather references. The more - the better, but make sure you only get the references which you find useful. For ex. there is a certain piece where you like the design of boots - focus on that and bring it into your board. Don't collect references where you don't understand what you like about them - they will clutter your board.

THE VIBE



Blade (1998)

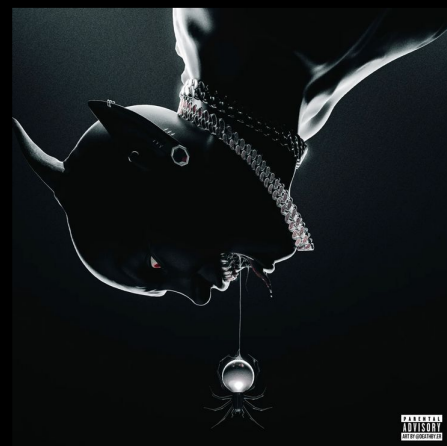


Woyzeck – Robert Wilson

I have two sections for references. One which is useful for my design choices, and another one with the spoken Vibe - cool lighting, striking pose, vivid colours that make me feel things. References like this will help me with the render stage.



Zlatimir Arakliev



Doja Cat

DIVING IN

Now it is time to dive into Zbrush (or any other software you use). Feel free to sketch in 2D. Personally, I find sketching to be the best part of the whole project. This is the time where we can just focus, turn on the music that will set up the mood of the project, peek at references and just let go and dive in. Down below I will tell you how to do it.

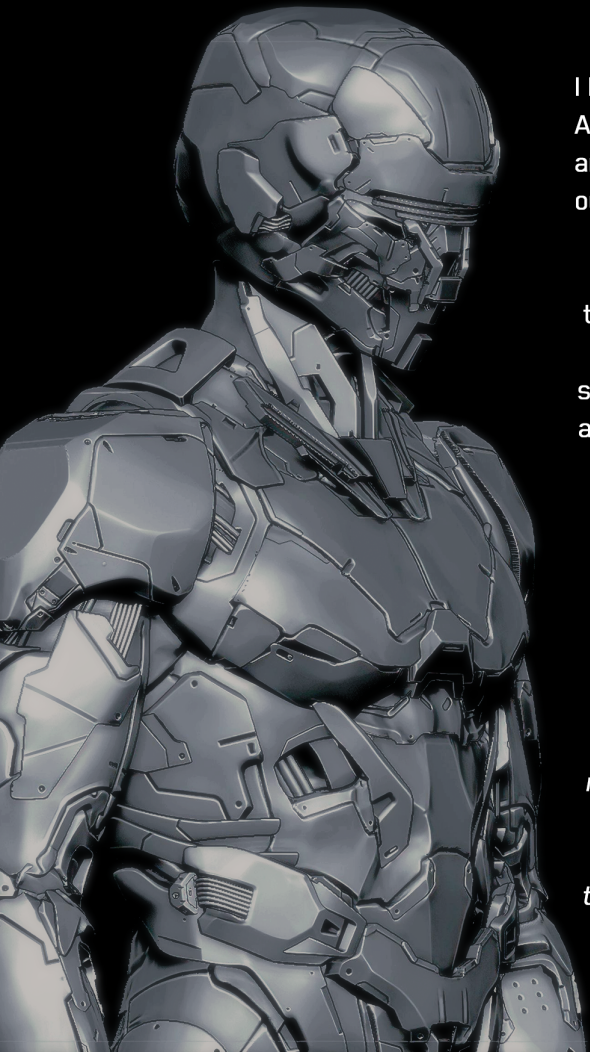
→ SHOULD I START FROM SCRATCH OR WITH EXISTING MODEL?

This choice depends on the amount of time you've got and how unique your character is. If it's an eight legged spider man with torso of a ripped Zeus probably it will be better to sculpt it yourself from scratch, combining primitives and using load of dynamesh.

If it's more recognizable humanoid, maybe a cyborg with metal arm and leg - we can easily go for existing models and start from them, saving ourselves some time on the basic body sculpting.



My personal project wip



I heavily rely on Dynamesh, masking, Panel Loops, a bit of Zremesher. At the stage of blocking out it is crucial to focus on the whole model and not dive into details. We must establish a readable silhouette of our character.

→ Make sure that shapes you are using are telling the viewer who the character is. Usually, more round shapes hint on a friendly character, when more narrowed angle, spiky shapes indicate enemy, or someone dangerous. To help viewers understand the nature of character certain color patterns help. Remember Disney villains, for example.

TIP

*I recommend you to look into your inspiration board and ask yourself: why do I like this? What made me save this pic? Is it the character design, perhaps render, colours, maybe a specific part of a robotic element? Make sure to note this down. You can look through these lenses on any picture you have ever saved - you might find a lot of interesting things and get to know yourself better, get closer to finding your personal style too. **It is crucial to know what you like.***

WHILE YOU ARE ESTABLISHING THE SILHUETTE AND WORKING THROUGH THE MAIN SHAPES, IT IS IMPORTANT TO KEEP IN MIND SOME OF THESE SIMPLE DESIGN RULES WHICH WILL HELP YOU TO DESIGN EASILY DOWN THE LINE.

→ Keep it balanced. Don't throw too much details in one section, leaving off the rest. You want the design to feel as a whole, keep the same design language in place: meaning the lines, the cutouts, the angles, little details like alphas, circles etc. all of them should be consistent through the whole design.

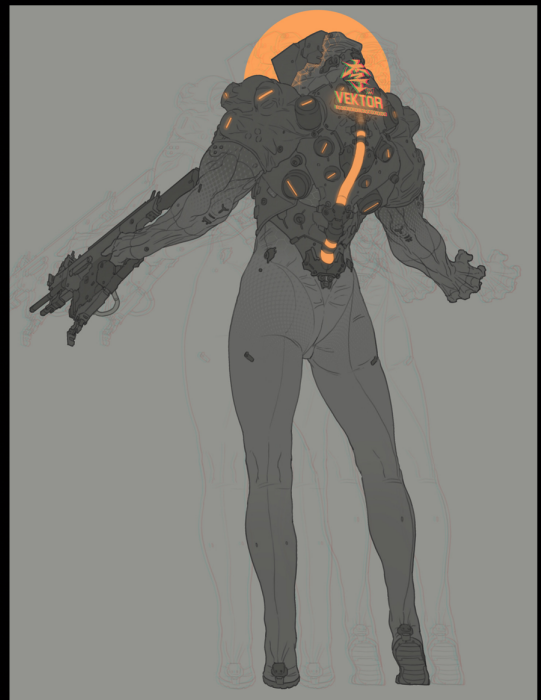
→ Give it some rest. It's a good idea to keep some surface clear from the details, so the eye won't get too tired of looking on a constant details. It will also help to point the eye of a viewer where you want it to be. Use 80/20 or 70/30 ratio.

Vitaly Bulgarov



→ Use patterns on surfaces. They are cool and make designs much more interesting.

→ Usually the main focus of a character, the first thing we all look at - is their head. Then, the eye travels to the chest, limbs, and only then to legs. You can highlight some of these by adding color, adding interesting shapes - break the silhouette.



Jin Roh

→ Add contrast. Contrast makes the design sing and stand out, it catches the eye of the viewer. We can manipulate contrast through shapes, colour and texture. Use this wisely.



www.JAROLD5NG.com

Jarold Sng

→ HOW DO I NOT GET LOST AND STUCK IN THE DESIGN PROCESS?

Keep the sketch in one tool. While you figure out the main design, it's very useful to keep everything in one solid body rather than separate them into pieces. This will allow you to make quick changes, move, mask out and cut things without too much hassle. It's crucial to work on the whole character pretty much simultaneously. Work a little on the head, then move to arms, chest, etc. Don't spend 30 minutes sketching out the head, while the body is empty. It will be hard to keep the design flow consistent that way. Think of a bigger picture.

Add colours. It will help you a lot to colour your character during the sketching phase. Figure out the colour palette by looking at the references, thinking about the colour theory. Colour will add a lot of separation and dynamic to your character, will help you to see the weak points of the design and new ways on how to improve it.



Polypaint Color separation example

HOW TO MAKE THESE COOL INTERESTING SCI FI DESIGNS?



Layers!! by Amos Chang

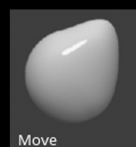
It's layers.

I get it, we all want these cool complex designs we see all over socials and Pinterest. Aside from the messy AI ones - how do we make it in 3D? It's not that hard, but it requires some thought.

To make design complex and interesting, start with simplicity first. That's what we do in a sketch - we outline rough structure, cut outs, planes, then we extract it, polish it up and move on.

To make design complex though, you need to make interesting shapes on different levels. Let's say we've got few planes - cool, but boring. But what if one goes under another, and another one actually has a mesh that shows that there is something underneath? That way we've got three layers of surfaces, already making it more interesting than just one layer.

One of the fun ways to experiment with it - is to move subtools with move brush. Yes, the result is going to be organic looking, but we can work on top of that and make it more solid if needed. But move brush is great to quickly iterate with different positions and shapes, allowing us to achieve this cool layered look.



FORM VS FUNCTION

and how to balance it.

By its design function sets limitations.

And this is the biggest help you can get on your designing journey.

For example, if you want to design boots, you have to keep in mind that foot is an intricate and complex part of the body in constant movement. This movement sets up limitations - you can't make the sole a solid metal piece. You can't make the boot without any fastening systems, without any seams - it will fall apart.

Give yourself as much limitations as you can. This will be your map.



Sole is moving, fingers are anatomically correct. Main material is leather - believable.



Very pretty, striking design - bet it's hard to see in them though. Choose your priority.

→ Of course you will have to balance form and function. Your design brief should help you out with this. Is your design something that has to be worn, animated? The way it's supposed to be used will give you a lot of hints.

→ If it's something which will never be produced the task is simpler. Just make it look like it works. Make it look believable enough. The rest is up to your imagination.

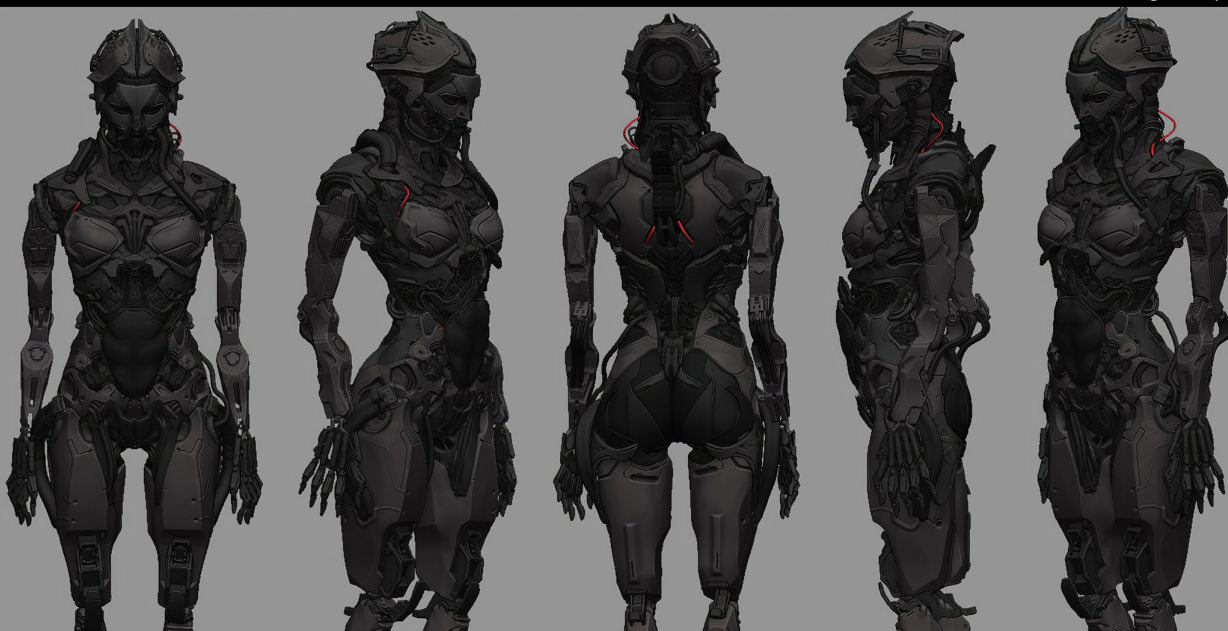
REFINING

or how to not go mad with 1000 subtools, cuz cyborgs have a lot of cogs.

HOW TO KEEP THE WORK STRUCTURED?

Go with the flow, but as with the sketching phase, make sure you are not spending hours on one piece - we've got a deadline still, so give yourself a rough time estimation, how long can you allow yourself to spend on one piece. Then get it done. If you don't like the result but the time is up - move onto something else and then come back. This will keep your mind agile and you won't get too tired.

Rogue AI by me



→ Make sure you add details without over doing it. Remember about balance and the ratios. One of your goals is to train your eye to see and feel if something is wrong. The more you design, compare, look, analyze - the better you will become at it.

→ On the pic above there is quite a lot of details, but even still, I give empty areas to the design so eyes can rest. Her breasts, helmet, legs, glutes, tricep area, lower arm - they are not dense with details.

Make folders. Keep your work structured. Separate folders with arms, torso, head, etc. Delete unimportant layers, subtools, everything which you are sure you won't be using, everything outdated. The cleaner your space the easier it is to navigate and present it.

CHANCES ARE...

YOU DON'T NEED TO WORK ON EVERYTHING.

What is the difference between design language and style?

If this is not a production model. I know that many of us have a striking perfectionism, wanting to work through all the details, some even work through the inner sides of the design - but trust me, most of the small details won't really be seen in render. Don't spend too much time in the difficult areas as well, like armpits, inner thighs, etc. - everything that will be covered, hidden, in the shadows, most of the time. Prioritise where you put your time in. If you really want to detail everything - make sure it is worth it.

Workflow steps of "The Night Walker"



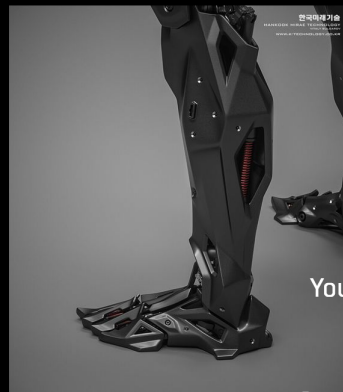
TIP

I do not recommend to start working on the head and only then add up the rest of the body. It will be extremely hard to come to the good result, or at least, the one you are satisfied with. You need to have an extremely precise vision if you want to attempt this. Otherwise, it will take a very long time to match everything and make it feel good. Start with the whole body instead.

ANATOMY

Yep. You need to know anatomy. In fact, the better you know it - the better designer you are going to become. It is especially important if we talk about sci fi. Let me explain.

A lot of Vitaly, Amos Chang, Maciej works



You won't be able to make creative and cool designs like this without knowing how the body works and looks.

Our brain is wired with the knowledge of how things are supposed to look. We already sort of know the muscle structure, the bone carcass, so if anything doesn't follow this structure it becomes weird to us. Remember the term "Uncanny Valley" - this is what I'm talking about.

→ Learning anatomy takes time, I recommend to practice daily sculpts with different body parts. If you can draw then sketching from pictures will help you a lot. Remember about proportions also.

→ Always refer to your 3D basemesh. Make sure to pick a good one. Things like écorché help too, especially if you keep them in the scene.

Never disregard anatomy, if something looks off it will ruin everything.



VISUAL LIBRARY

→ YOUR BIGGEST PRIORITY.

HOW TO REMEMBER STUFF AND GET BETTER IN DESIGN?

Analyze. Compare. Replicate. Repeat.

Go to your favourite sexiest reference library and pick whatever you like. Open Photoshop or any software where you can scribble. Open up the ref and line out all the design principles you see like I show below.



This is a really smart design. One of my favourites. Lets look into it.

→ We see a broad male figure. He is strong, confident, dangerous. His head - main focus highlighted by contrast. No gear, only flesh and infected eyes. Spooky.

→ Look how his gear tightly fitted to the body, yet the artist made an effort to make gear poke out of the silhouette, making it more interesting and dangerous.

→ 70/30 ratio. Armor forms a firm broad shoulders.

→ Notice the repetitive patterns all around the character. When you add an element somewhere you are almost making it an obligation to continue to repeat this element somewhere else. Armor is riddled with circle elements and it goes beyond that, his skin also has some circle pimples. ■

→ Carbon fiber on chest is repeated on knees. ■

→ Tube goes all around upper body. Curves of his armor on hips add a nice flowing touch. ■

→ The empty area with clothes are giving our eye some rest, yet even they have some vertical stitches giving extra supporting curves. ■

→ Horizontal straps break the flow a little and make the design feel grounded.

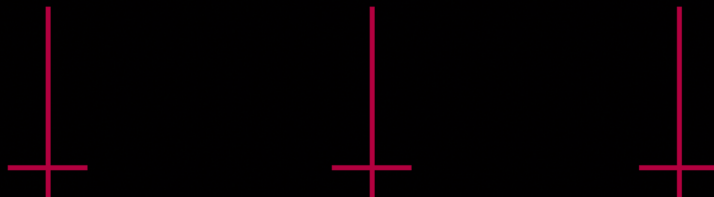
→ Yellow colour pops all around the design.

BY IMPLEMENTING THE TECHNIQUE ABOVE YOU WILL TRAIN YOUR BRAIN TO CONSTANTLY SEARCH FOR PATTERNS.

And this is what design really is. Organizing chaos into patterns.

→ The second step will be bringing references you like into 3D and trying to replicate them there. It will also boost your sculpting/modeling abilities, which you will also need to train - the strain of not being able to produce the design you want is deadly. Make sure you can model anything.

→ When you are getting started don't shy away from constantly looking at your references. They are your lifeline. You remember them, learn from them - treat it as they are your textbook. Without them you won't be able to make anything solid when you are getting started. Later on it's okay to be needing less, but even then - reference board is your map. Use it.



MAKE IT POP

→ Colour is an insanely powerful tool to get your character feel right. You can use it to highlight certain details without touching the shape of the object, which often times can be very useful.

Jerad S. Marantz



→ Colour can also be used to give away more info about the character easily. Certain colour reflects certain moods. That's why vampires usually wear black and red, because this is dangerous and sexy. Bleak green/yellow makes us think about sickness, while pale blue gives a hint of loneliness. This is called color theory and semantics of colour. I recommend you to look into it.

Let's move to patterns. I personally think this is one of the greatest tools you can use and it definitely needs its own paragraph.

→ Patterns can be categorized in two groups: pattern within one mesh, like pattern on fabric, or a mix of few meshes forming a pattern, like knights armour ornaments or a mask on the left.

By implementing patterns in your design you naturally create a repeating noise. By placing it wisely and not ruining but supporting the balance you can make your design much more eye catching. The viewer will want to look closely and examine the details. Don't shy away from this useful trick.



Andrey Kryukov



Frederic Daoust

MAKE IT LOOK COOL

This one is crucial.

→ Give your character a story. Who is this guy? Where does he come from? Give his armour scratches, give him personal trinkets, make the boots covered in dust, give his face a gruesome tattoo. Give the viewer additional info, make them feel.

→ Remember, materials can never be pristine. Real life is always imperfect. Give metal scratches, fingertip marks, tear their scarf, use some tape.

In the reference section I was talking about **THE VIBE**.

This is what's going to help us out with the render stage, because one of the most important things in presentation, if not THE most important one - is **LIGHTING**.



Hits different doesn't it? Lets see why.

→ When you present the character it's crucial to highlight it in the most beautiful way. Use light as a tool to help you guide the attention of the viewer where you need it to be. You made a gorgeous back design? Highlight it. You love and adore the edgy silhouette of your character? Show it.

→ Good design can be messed up with the bad lighting and bad design can be saved with a good lighting. The setup changes everything.

→ I always loved to dive more into vis dev of a character. If you want the best outcome from your work, make sure to show presentation render of your design and then vis dev shots of how your character actually looks like in a different environment. I personally love the black studio shots with dramatic rim lights.



Vis dev

→ To become better at lighting analyse your references, count the light sources, try to replicate the setup. Technique of learning is pretty much the same one we use with the design.

ANALYSE → COMPARE → RECREATE → CREATE YOUR OWN BUT BETTER



EUGENIA FIRS

Design presentation shot

→ I prefer to start with a black HDRI and then fill the scene with lights. This technique gives me the most control, I can see clearly which light highlights which part.

Look for the **Resources** page where I link all the useful stuff which will help you out.

→ Check out lighting setups for photoshoots, there are a lot of cool things you can find. Play and experiment with light.

Remember - the most important thing is your **vision**.

You gotta have one.

STYLE.

Coming up with your own style may prove tricky for a lot of people since this is extremely meaningful - everyone wants to be recognisable. Look at the work of your favourite artists and ask yourself - **how do I know it's them?**

→ I genuinely believe that art style has a lot to do with our own psyche, so it's crucial to know who you are, what do you like. And it should be precise. Don't just think "I like bright colours and anime" - because this is not enough. Make it straight, nail down everything until the very last detail of what it is you like exactly. Looking at another artists work. And not just that, whatever it is that gives you that dopamine hit - movies, nature, fashion, sci fi - make it count, write it down and sort through it. Categorize it. Remember it. Ask questions.



Liam Feng



Mike Nash



Tekken

Eventually you'll see that probably there is a certain **vibe** to what you like. For example, I always found myself drawn to the mostly dark art, and dark not only in terms of colour and light, but also the setting, the aggressiveness, the sexiness, particular shapes and mood that they convey.

→ If you struggle to find out what it is you like, it means you need to dig deeper. Look at what you like on Pinterest, IG. What media it is, what style, colours, setting, everything. Eventually you will start getting the idea.

TRY NEW THINGS. EXPERIMENT. IF YOU STRUGGLE, LOOK REALLY HARD. YOU WILL FIND IT. DON'T SIT AROUND AND THINK. START DOING, START MAKING THINGS.

Knowing what you like will give you a massive head start with your art. Then you work on pushing it further and make it interesting, make it better - skill wise and/or creativity wise. Eventually with time, after going through this rocky road you will settle on your own style. Just give it time and **create what you wish existed**. We all have this fire burning inside us and each and every person has a different one. Just let it burn and nurture it.

YOUASKED

I answered.

Some picks from my Instagram Q/A.

→ *How to turn from 3D artist into a concept artist?*

Learn how to make cool stuff fast. Be able to iterate your designs. Become fluid. Learn Photoshop, learn sketching (at least). Understand how things work - if it's clothes then how they are worn, if it's a prop how its build and how it works. Become versatile.

→ *Just started learning 3D and Zbrush. How do I become good?*

- First, make a solid learning plan and set up achievable goals.
- Prioritise art fundamentals (anatomy, colours, composition) - applies if you are also into concept art
- Work on your visual library
- Learn something new related to the subject every single day
- Be consistent. Lock in.

→ *Is it okay to use Kitbash and when?*

Every kitbash pack is a double edged sword, unless it is the one you made yourself. I recommend to use kitbash sets which have only natural and mediocre, boring things you don't want to waste your time on modeling like buttons, screws, some misc parts. Anything neutral, which doesn't have inprint of another artist style.

The best kitbash is the one you build yourself. In there you can add all kinds of pieces, big or small - they are made by your hand and they will keep your characters design consistent.

→ *What is one of the most important things for an artist?*

The ability to stay fluid. And I would say it expands to everyone. It's not important what they do for a living. Ability to adapt, to experiment, to cancel out the noise - these are the best traits to ensure you will if not thrive then live pretty good.

And, of course, having patience and being consistent with actions.

YOU REALLY DO NEED TO STOP OVERTHINKING. MAKE A PLAN. FOLLOW IT. BUT DON'T PLAN FOR TOO LONG - ACTION IS MORE IMPORTANT THAN PLANS.

IF YOU REALLY STRUGGLE AND FEEL GLUED TO THE FLOOR THEN DON'T PLAN, JUST START DOING, START CREATING AND SHARE IT.

DON'T STAY INVISIBLE.

IN THIS DAY AND AGE IF YOU ARE INVISIBLE - YOU DON'T EXIST.

USEFUL LINKS

→ LEARN THERE.
ALL NAMES ARE CLICKABLE.

→ ZBrush courses

Learn Squared - Concepting in Zbrush by Alex Figini (OG course which got me started)

Zbrush for Conept Artists by Ben Mauro

Visual Design Basics - Intro to Design by Alex Senechal

→ YouTube channels

Keos Masons

Michael Pavlovich

Art of Haf

J Hill

Pablo Muñoz Gómez

Evgeniia Petrova

I find YouTube to be one of the most useful platforms for learning any subject. This is just a small number of useful channels.

I recommend to really dive into learning and upping your skill if you want to get better in designing in 3D. Design ability and actual technical skill go hand in hand.

→ Broader Character creation courses, more 3D art inclined

Advanced Character Creation with Ben Erdt - hard surface gold

3D Character Art with Antonio Esparza - more military inclined, love the style

These courses are not pivoting on design, but they dive more into 3D optimisation for those who are interested.



AT LAST

I HOPE YOU FOUND THIS GUIDE USEFUL AND
IT HAS INSPIRED YOU TO CREATE SOMETHING
AWESOME. JUST DO IT.

IF YOU WANT TO DIVE DEEPER INTO MY PERSONAL APPROACH IN DESIGN IN 3D, I'VE MADE A
MINI COURSE WHICH WILL HELP YOU TO UNDERSTAND FORMS BETTER AND BECOME MORE
FLUID IN DESIGN IN GENERAL.

GET IT HERE

OCCASIONALLY I PROVIDE MENTORSHIPS TO SELECTED PEOPLE. IF YOU WANT CUSTOM TAILORED PROGRAM FOR LEARNING 3D, DESIGN AND CONCEPT ART FAST
DO REACH OUT

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